Installation Manual

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More information can be found at www.etherhome.com and www.xxter.com

Content

Welcome

With xxter you can control your home or office with your iPhone, iPad of iPod touch with just a few simple steps. This manual explains how to install xxter. This includes how to connect and install the device, as well as how to make and configure a project on the configuration website. When this is done an end-user can make his own profiles and pages, after which xxter is ready to use.

This manual requires you, as an installer, to have basic knowledge of KNX, ETS and Ethernet networks.

Within this manual there are many references to the end-user. The end-user is the person who will use xxter after it is installed. It is of course possible you will use it yourself. More information can be found in the user manual.

Etherhome

1. Registration

The installer registers all the xxter products he installs as a professional. This makes it possible for the configuration system to know which product should get which configuration. You can change the configuration anywhere, for instance at your office.

Afterwards the end-user registers xxter as an end-user, this is also important for warranty reasons.

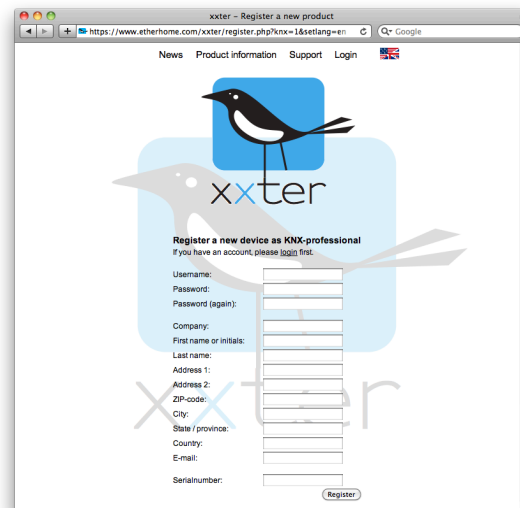The configuration of xxter is almost all done through a website.

To register xxter as an installer, open a web browser and enter the following url:

http://www.xxter.com/prof

If your language is not selected correctly, you can change it with the language-flag on the page.

If this is not the first product of Etherhome you've installed and registered, you should login first with your username and password. There is a link on the registration page to continue to the login screen. If this is your first product, please enter your details on the page. The page is on a secure environment, to ensure your privacy.

Remember your username and password, you will need them later.

The serial number of your xxter can be found on the device, on the package and in the back of the user manual.

2. Installation Summary

Installation of xxter requires the following steps:
- Create a project with components
- Selecte the project for xxter
- Install the cables and the device
- Set up the network settings
- Configure and test the connection to the KNX-IP gateway
- Optional: make xxter reachable from the Internet.

All these steps will be explained in the following chapters.

First you have to create a project with all the KNX components on the website of xxter. If you are going to install xxter on another location, you could do this in advance at your office.

Website www.xxter.com
1) Register xxter
2) Create a project with components
3) Set the project for xxter

Router
7) Optional: Change the settings of the router, to allow the App access to xxter from the Internet

Internet

3G

wifi

xxter

Webpage xxter
4) Connecting xxter
5) Network settings
6) Set up KNX-IP gateway

Computer with browser

KNX - IP gateway

KNX installation
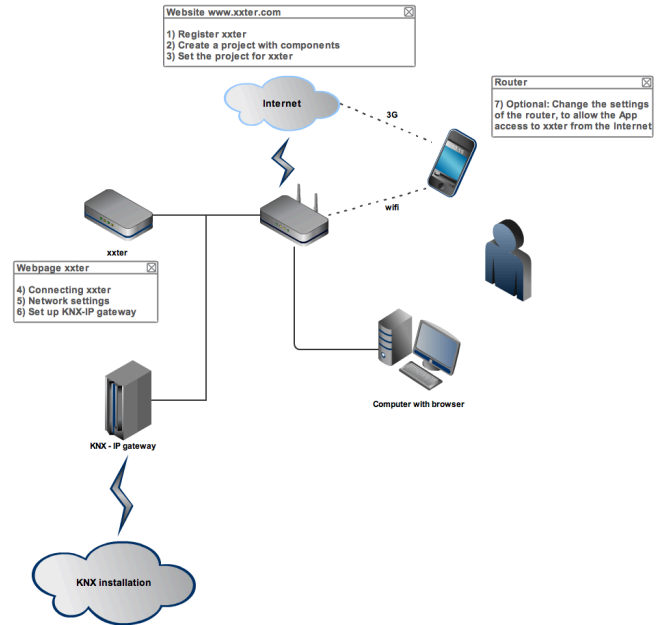
3. Projects

The configuration system works with projects. This makes it easier to service more end-users or customers with xxter units. You need only one username and password as an installer. All settings are stored in a central database, which makes it possible to change the configuration at the client's location or remotely at your office.

When you register your first xxter, an initial project is automatically created. You can select it through the menu *Projects -> "Default project"*.

In the *Projects* menu you can select *setup projects* to create a new project.

On the specific project page, you can also change the name of the project.
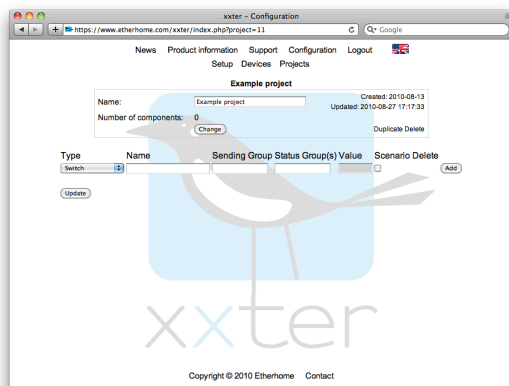
4. Components

Each project has components. You can add them by entering the appropriate fields on the project page and press *add*.

All components need a name. This name must be chosen carefully to describe clearly what the component stands for. The end-user must know what the component means. For example for a switch: "Living room table light by window".

Components can have the following properties:
-   Sending group: The KNX-group on which to send telegrams.
-   Status groups(s): one or more KNX-groups, which present the status of the component.
-   Value: a value, which is sent by the component or listened to by the component.
-   Scenario: When scenario is checked, this component can be controlled and used in a scenario.
(see next image)

You can also use ArtNet addresses instead of KNX-groups. More information can be found in chapter 9, page 21.

Below, you'll find a description of most of the components and which fields to use.

Switch
A switch is most of the time a relay actuator. This component needs a sending group, and most of the time one or more status groups. All groups must be 1-bit. When the switch is to be available in a scenario, check the scenario option.

Dimmer
A dimmer is a dim actuator. It requires a 1-byte sending group (0-100%), and probably one or more 1-byte status groups. When a dimmer is to be available in a scenario, check the scenario option.

Some older dim actuators do not have a status output option. In that case you can add the switching groups to the status field. When receiving an on or off telegram, the dimmer status will be set to 100% or 0% respectively.
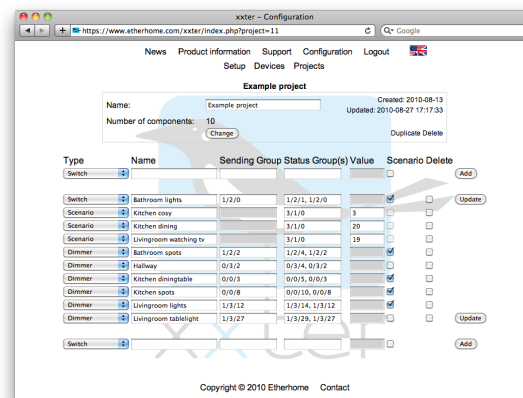
Scenario
A scenario can easily be used and configured by the end-user. The installer just needs to create the groups and values. The scenario component listens to the status groups, when the value is sent on one of those groups, the scenario is activated by xxter. The status groups must be of the 1-byte (0-255) type and the value between 0 and 255. This makes it possible to call a scenario the end-user configures from a KNX-pushbutton.

It is recommended to create some "unused" scenarios. This makes it possible for the end-user to configure a scenario, which he can call directly from the app, without the installer having to change the configuration.

The User Manual contains detailed information on how scenarios work.

Send byte value
This component is used to send a static byte value (0-255) on the KNX system. The sending group should be of the 1-byte type. Optional this component can be used in a scenario.


Temperature, light intensity, wind speed, atmospheric pressure and humidity
These are all components with 2-byte group types. All groups are optional. Value is not used for any of these components and they cannot be used in scenarios.

5. Cameras

After selecting a project, you can select *cameras* below the project details to go to the camera configuration page.

This page lists all the configured cameras for this project. By clicking on a specific camera, the details are displayed and can be changed. On this page you can also add new cameras to the project.
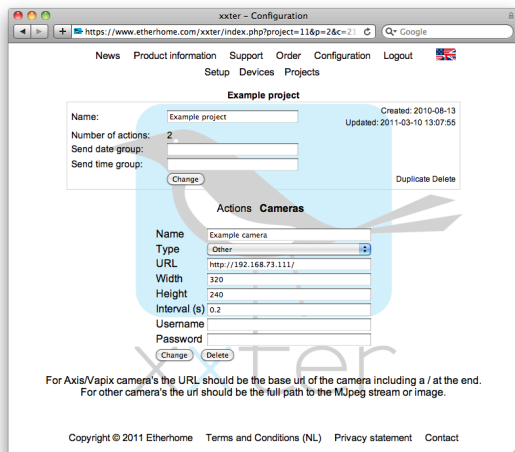
First enter a name for the camera, which will be used to recognize the camera in other parts of the configuration process.

Next, choose the type of camera. Depending on the selected type, the other relevant settings are displayed.

Type: Axis (Vapix compatible)
If you have a Vapix compatible camera, choose this option. Almost all Axis cameras are Vapix compatible.

URL: the base url of the camera, for example:
http://192.168.73.11/
Width: the width of the camera image in pixels.
Height: the height of the camera image in pixels.
Camera number: the camera number for multi video-encoders. Leave this setting empty in all other situations.
Supports pan/zoom/tilt: select the features, that are supported by the camera.
Username & password: (optional) enter a username and password for authentication, when authorization is required.

Type: Mobotix
If you have a Mobotix compatible camera, choose this option.

URL: the base url of the camera, for example:
http://192.168.73.11/
Width: the width of the camera image in pixels.
Height: the height of the camera image in pixels.
Supports pan/zoom/tilt: select the features, that are supported by the camera.
Username & password: (optional) enter a username and password for authentication, when authorization is required.

Type: Mobotix T24
This type is for the T24 intercom unit of Mobotix. Most settings are the same as the other Mobotix cameras. The additional settings are described in a separate manual, especially for using the T24 unit with xxter. This manual can be found on our website: http://www.xxter.com/support

Type: Other
For all other types of cameras, choose the option *'Other'*.
The following types of images are supported: MJpeg, Jpeg, Tiff, Png and Gif.

URL: the complete url to the image of the camera, for example: http://192.168.73.11/video.mjpeg
Width: the width of the camera image in pixels.
Height: the height of the camera image in pixels.
Interval: the refresh rate for retrieving the images. (not used with MJpeg).
Username & password: (optional) enter a username and password for authentication, when authorization is required.

6. Devices

In the devices menu, all devices are listed that you have registered. On the *Setup devices* page you can register a new device.

It is possible to change the name of a device, which makes them easily recognisable, for instance which device is installed on which location. Also you can select which device has to be configured for which project.

7. Connecting and Installing the Device

xxter has a couple of connectors, all on one side of the device. Not all are used at this moment, they are reserved for future use.

The connectors to use are: the power connector of the included power adapter and the network connector. The network connector has to be connected to the same network as the KNX/IP gateway. xxter will also require Internet access.

Reset

xxter has a reset button. With this button it is possible to reset the settings and firmware of xxter to it's factory defaults. To reset to the factory defaults, the following procedure has to be followed: First remove the power connector from xxter, push (and keep pushed) the reset button, reapply the power connector to xxter, and keep the button pressed for two minutes, in which xxter will start and restore to factory defaults.
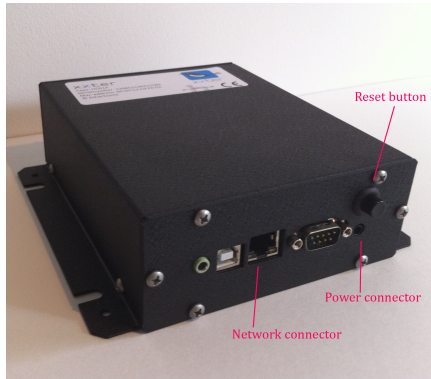
8. Initialization

By default xxter has been set up to use DHCP. Most of the time this is the easiest way to set up the network settings. Go to your DHCP-server, and look up the IP-address assign to xxter, after it has started.

When no DHCP-server is found on the network, xxter will use the following default settings:

IP-address: 192.168.0.150
Netmask: 255.255.255.0

Set up your computer to use the same netmask and an IP-address in the same range, for example 192.168.0.10.

To initialize xxter go to the webpage of xxter, by going to the following url:

http://*IP-address*:8000/

The IP-address must be replaced by the IP-address of the device. In the back of the user manual there is room to write it down. The end-user will require this information as well.

Your browser will ask you for a username and password. By default these are 'username' and 'password'.

It's essential **not** to change the username and password, the end-user should do this for xxter to receive the correct settings.

Through the menu *System settings*, you can change the language, if preferred.

Through the menu *basic settings* you can change the network settings of xxter.
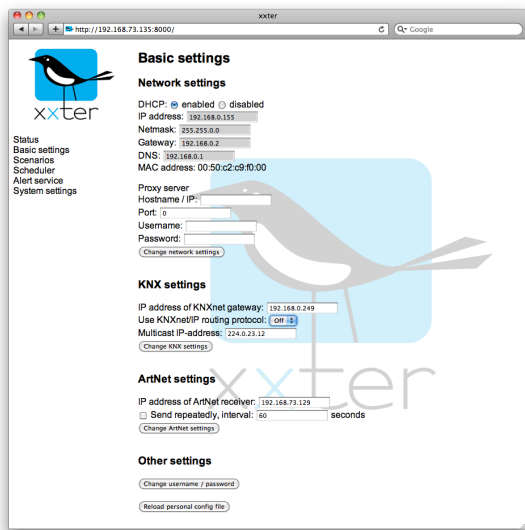
If the connected network has no direct Internet connection and requires a proxy-server, you can set the appropriate settings here. Ask your network administrator for the required settings.

Note: at this moment only HTTP-proxies without authentication and HTTP-proxies with basic-authentication are supported.

On the same page you should set the IP-address of the KNX-IP gateway. On the xxter website you can find which brands and types of gateways are tested with xxter.

As of version 1.4 of the firmware, the KNXnet/IP routing protocol is also supported. If you connect through the routing protocol, set routing to "On", in all other situations to "Off".

Attention: The multicast IP-address should be the same in the KNX/IP router and xxter. Some network equipment does not support multicast which will result in the blocking of routing traffic.

After changing these settings, you can check if xxter can make a connection to the KNX system through the status page of xxter.

On the *system settings* page you need to setup the correct location for the system (Longitude and Latitide). These settings are used to calculate the correct sunrise and sunset times. The required settings for any geographical location can easily be found on the Internet.

When the device can connect successfully, the end-user can set up the rest of the configuration. It might be helpful to do this together for the first time.

9. ArtNet (DMX)

ArtNet is used to control DMX equipment through Ethernet. An ArtNet -> DMX node can be used to control RGB LED's, for example. Etherhome has tested different ArtNet -> DMX nodes, which are published on the website.

The ArtNet settings are part of the *basic settings*, which you can reach through the menu of your xxter.

Here, you can specify the IP-address of the ArtNet-node.

In specific situations, it might be useful to have the ArtNet values sent repeatedly. For example, if the ArtNet node is not always powered on. If this is the case, you can select *Send repeatedly* and you can specify which interval to use.

DMX addresses
You can use DMX-address instead of KNX-groups for the appropriate components of a project. (see page 10).

DMX values are always one byte and can be used in combinations with switches, dimmers, byte-values and RGB-controls. If you use a DMX address in combination with a switch, the value will be set to 100% for On-commands.

A DMX address is a combination of a universe and an address. A universe must be 0 to 31, an address 0 to 511.

For example, you can write DMX:0/12
This would be address 12 of universe 0.

10. Using xxter from the Internet

If the end-user wants to use xxter from the Internet, instead of using it only at home through the wireless network, the router, firewall or modem should be configured to allow access to xxter.

The following port forwarding has to be configured to the local IP-address of xxter:

TCP: 2199

Consult the manual of the router, firewall or modem for instructions.

If you have cameras in your xxter configuration and would like to see them from the internet, you need to create port forwarding for the cameras as well. Usually cameras use port 80. If this is another port, please specify this in the configuration of xxter.

For example: A camera has internal IP-address: 192.168.0.15 and uses port 81. Your external IP-address is 80.60.71.32.

Change your router configuration to forward port 81 to port 81 of IP-addres 192.168.0.15.

Within the configuration of xxter use the following URL:
http://80.60.71.32:81/path_to_video_image...

11. Updating the Firmware

On a regular basis, a new firmware (system software) version is released for xxter. This new firmware can contain new features and also bug fixes. On the xxter website, the latest version number is displayed. xxter can also check for new firmware itself.

Go to the *system settings* of xxter and then click on *"Check for firmware updates"*. xxter will now check if there is a firmware update available and displays the result on the next page.

By choosing *"Update firmware",* xxter will update the firmware, this might take a minute. After successfully updating the firmware a reboot is required. You can do this by choosing *"Reboot the device".*

Important: do not turn off xxter **while updating the firmware!**

After updating the firmware, it is advised to also reload your configuration.

12. Tips, Tricks and Frequently Asked Questions

How can I check if xxter **is connected to the KNX system?**
Through the webpage of xxter, accessible through http://IP-adres:8000/, you can check the connection on the status page.

How can I use xxter **from the Internet as well?**
In the chapter "Using xxter from the internet" this is explained, see page 22.

How can I setup scenarios and use them?
First they must be created, on page 11 is explained how to do that. In the user manual it is explained how to configure them and use them.

Which KNX-IP gateways are supported by xxter**? And which protocols?**
This information changes on regular basis. You can find it on the website of xxter.

The latest version of the manual can be downloaded from:
http://www.xxter.com/support
On this website you can also find all kinds of examples.

A more complete "Frequently Asked Questions" can be found on
http://www.xxter.com/faq

13. Service and Support

Answers on frequently asked questions can be found on:

http://www.xxter.com/faq

Other support can be found on:

http://www.xxter.com/support

If this does not supply you with the desired solution, you can contact our support by emailing your problem to support@xxter.com. Please always include the serial number of the xxter you are experiencing problems with.

14. Glossary

App: The App is the xxter App from the Apple Appstore. (more information can be found in the User Manual)

ArtNet: This is a protocol, which is used to send DMX messages on Ethernet. (see page 21)
More information can also be found in the manual of your ArtNet/DMX equipment.

Camera: The App supports network cameras. These need to be set up before use. (see page 13)

Component: A KNX component, like a switch or a dimmer. (see page 10)

DHCP: DHCP is a protocol used to share network settings. A DHCP-server gives network clients all the required settings. By using DHCP, it is not necessary to set up all the network settings of the clients by hand. Often a DHCP-server is integrated in a modem or router.

DMX: This is a method, originally only used in theatres to control lights. To use this special equipment is required.
More information can also be found in the manual of your ArtNet/DMX device.

DNS: The IP-address from the DNS-server. The DNS-server converts domain names to IP-addresses.

Firmware: The firmware is the software on xxter itself. This can be updated. (see page 23)

Gateway: Most of the time this is the IP-address from the router or modem. Through this IP-address xxter can reach the Internet.

Hostname: A (domain) name, which points to a specific IP-address on the Internet or the local network. For example: www.xxter.com

IP-address: A unique number which point to a computer or other device, which is connected to the Internet or a local network. (see page 18)

KNX: This is the name of a European standard system for home automation. xxter communicates with KNX to control your home. (see page 10)

Netmask: The netmask is network specific. This should be same as the setting in the router or modem.

Project: A project is a group of components, which are connected to the same xxter. (see page 9)

Proxy: A proxy (server) is a system to connect a network to Internet indirectly. Proxies are mostly used on large corporate networks. (see page 20)

Scenario: A scenario makes it possible to change the state of multiple lights to a predefined setting with just one touch. (see page 11 and the User Manual)

Universe: A universe is a term used by the DMX protocol describing a group of addresses which are controlled by one node. A universe exists of 512 (0-511) addresses. (see page 21) More information can also be found in the manual of your ArtNet/DMX device.

15. Technical specifications

Size (LxWxH): 170x164x51mm
Weight: 0,36 kg
Voltage: 5VDC
Power: 300mA (avg.)
Cooling: passive

Accessories:
1x Adapter 5VDC
1x UTP cable
1x Installation manual EN or NL
1x User manual EN or NL

The other specifications can be found in the back of the user manual.